

#### **4.0 REVISED PAGES OF THE DRAFT EIR**

In accordance with section 15132 of the State CEQA *Guidelines*, this section presents the changes that were made to the Draft EIR to clarify or amplify its text in response to comments. In addition, minor changes to the project description have been made. These include: deletion of the “nesting” of toppled columns at the request of the California Department of Fish and Game, change of the project schedule by one year from 2004 to 2005 to accommodate longer than anticipated time requirements for Proposed Project permitting; and the use of AMERON PSX 700 siloxane paint product or equivalent rather than AMERLOK 400 epoxy paint due to the extended life of the presently proposed product over the previously proposed product. Such changes are insignificant as the term is used in section 15088.5(b) of the State CEQA *Guidelines* in that no new potentially significant impacts are identified.

The entire text of Section 1.0 of the EIR has been reproduced in its entirety. For other sections of the EIR only the revised text is provided here with reference to the Section name and page number where the text originally appeared in the DEIR.

## 1.0 EXECUTIVE SUMMARY

This section provides a summary of the document, including a description and evaluation of the Proposed Project, and the major findings of the document. It includes discussions of effects found not to be significant, and those found to be significant, and the recommend mitigation measures. This section also includes brief analyses of alternatives to the Proposed Project.

### 1.1 PROJECT UNDER REVIEW

This revised Environmental Impact Report (EIR) evaluates the environmental effects of the removal of a remnant pier structure and construction of bird roosting/nesting platforms on State of California Tidelands Lease PRC-421 (PRC-421). The Permit Applicant is Atlantic Richfield Company (ARCO).

#### 1.1.1 Background and Description

A partially demolished pier structure on PRC-421 is in a state of severe deterioration. This remnant structure is the remains of a pier and well service structure that was built in the early 1930s. During the 1950s, as the wells were permanently plugged and abandoned, portions of the pier were removed. The remaining offshore well service structure was substantially destroyed during a storm in 1980.

Structural and underwater inspections of the remnant structure indicate that the remnant structure is likely to suffer a catastrophic collapse in the near term, due to the presence of concrete voids in the pier columns below the water level (See Figure 1-1). If storm or earthquake forces do not induce such a catastrophic collapse, the progressive weakening of the remnant structure through continued corrosion and erosion will likely cause the same end result within a relatively short time period.

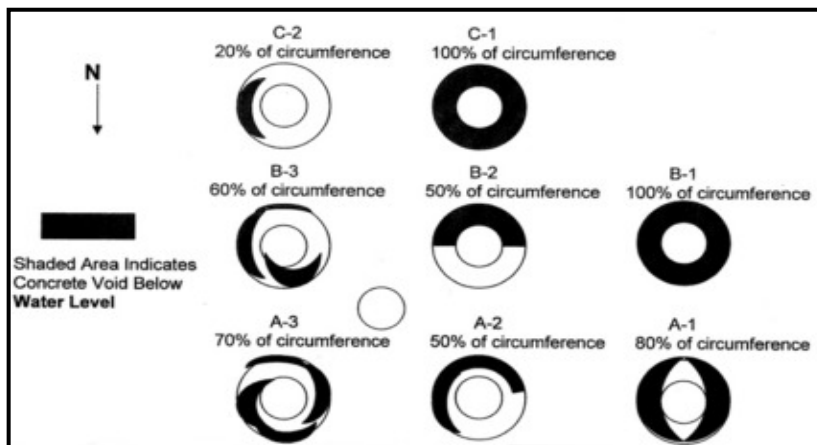


Figure 1-1. Underwater Column Degradation

The objectives of this pier removal Project are to eliminate risks to public safety from falling debris or a catastrophic failure, satisfy the California State Lands Commission (CSLC) requirements related to lease abandonment and cleanup after completion of oil and gas operations, and reduce ARCO's liability exposure.

PRC-421 is located about 2 miles west of Coal Oil Point in the Santa Barbara Channel, off the coast of the city of Goleta ~~County of Santa Barbara~~, California (see Figure 1-2). The visible remnant structure is approximately 850 feet offshore in about 32 feet of water (See Figure 1-3). Seafloor remains of the pier extend northeastward from the visible structure toward the shoreline. Approximately 22 rows of pilings extend toward shore. The pier remnants terminate within approximately 400 feet of the shoreline.

The PRC-421 Pier is the remains of a pier and well service structure that was built between 1928 and 1933 within the Ellwood oil field. The oil wells on the pier were plugged and abandoned in 1953 and 1954 in accordance with existing Division of Oil and Gas Procedures. Out to a depth of approximately -12 ft MLLW, the pier pilings were cut off at or below the level of the rock reef or sand. Beyond this depth, pier remnants remain above the bottom (with at least 12 ft clearance to the sea surface).

The visible structure is composed of eight steel-reinforced concrete columns with riveted steel trusses connecting them at the top. The steel trusses support the remains of a wooden deck (see Figure 1-4). Each column is nominally 8 feet in diameter, extends approximately 18 feet above the water, and is composed of four steel 'H' piles surrounded by a composite of concrete and reinforcing rods. The columns are arranged in three parallel rows with a northwest to southeast orientation, forming a thick "L" shape measuring about 60 feet by 60 feet. A portion of the northwestern-most column has fallen during a recent storm event (Winter 2001). The underwater portion of this column remains standing and will be ~~removed~~ toppled with the other seven. ~~The portion of the northwestern column that has fallen is currently resting on the seafloor and will be removed during the debris removal phase of the Project.~~ A conductor pipe from a previously abandoned well estimated to be 24 inches in diameter is located within the northwest section of the structural footprint (see Figure 1-4).

Metal I-beam piling remnants of the now absent causeway are aligned toward the shoreline, terminating at an approximate depth of -10 feet, and an approximate distance of 400 feet from shore. These pilings extend up to 4 feet from the ocean bottom, but none of them extend above the water surface. In addition, a second well conductor pipe measuring 18 inches in diameter extends to 8 feet above the ocean bottom, and is located within the original causeway alignment at a depth of -18 feet. This well conductor is surrounded by a 4-foot tall rock and sheet pile, a 36-inch diameter casing at its base, and several piling remnants projecting up to 4 feet out of the rock pile.

A draft EIR was prepared for the original Project which included removal of the pier remnants without construction of bird roosting/nesting platforms. The California Department of Fish and Game (CDFG) comments on the Draft EIR in May 2002 indicated that removal of the derelict structure would result in a loss of prime roosting habitat for the California brown pelican, a federal and state endangered species, and roosting/nesting habitat for the Brandt's cormorant, a state fully protected species. In response to the CDFG's concern, the CSLC, ARCO, environmental consultants, and the CDFG met to develop possible solutions to the marine bird impact issue. As a result of the discussions, it was concluded that a revised Project, a multi-pile arrangement that would support individual roosting/nesting platforms, would be designed (see CDFG letter dated July 30, 2003 included as Appendix Q). Furthermore, it is proposed that the eight concrete caissons be toppled in place and covered with quarry rock as a secondary benefit to provide hard bottom substrate in the area for marine organisms and additional structural support of the platform piles. Other portions of the original Project, such as inshore debris removal, would remain as previously planned. ARCO is agreeable to pursuing the Project, including the Project components mentioned above.

### **1.1.2 Project Components**

The Proposed Project components include: (1) removal of the wooden and steel deck structure, toppling of the eight remnant caissons, abandoning the well conductors and removing other pier-associated seafloor debris; (2) installation of four piles, construction of the hard bottom substrate and installation of the bird roosting/nesting platforms, (3) transportation and recycling of debris; and (4) completion of a final underwater survey to ensure removal of all debris from the Project site.

The existing structure will be removed utilizing typical offshore methodology and equipment. The Proposed Project will require the use of a Load Line Barge (LLB). Due to the existence of hard bottom and an associated kelp community in the area, an anchor-assist tugboat will be used to deploy anchors in designated anchor sites located within soft-bottom areas. In addition, other support vessels will be utilized, as required, for running anchors and transporting personnel and equipment to and from the project area.

The demolition and removal of the main deck of the pier will consist of systematically cutting and removing manageable pieces with conventional mechanical and oxy-acetylene cutting and rigging equipment. Removal of the pieces will be conducted with the use of a 230-ton conventional crane located onboard the LLB. All salvaged material will be loaded onto the LLB into bins or sea-fastened on deck for transport to shore for recycling/disposal.

Upon completing the removal of the topside structure and debris, divers will remove as much underwater debris ~~as necessary~~ in and around the caissons to facilitate jetting and removal operations of the eight caissons and the 24 inch well conductor pipe. Using divers and LLB equipment, sediment surrounding the well conductor pipe will be jetted, and the conductor pipe will be cut and removed to one foot below the mudline. The divers will then expose the four H-Beams at the base of each caisson to a point approximately four feet below the mudline.

Insert Figure 1-2 - Regional and Site Location Map

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Backside of 1-2

Insert Figure 1-3 - Aerial Photograph of Project Area

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Backside of 1-3



Insert Figure 1-4 - Site Photographs

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Backside of 1-4

The LLB will then be winched to its southwestern-most position to facilitate the upcoming blasting operations.

Once the barges are relocated to a safe distance away from the structure, Halliburton Explosive Services (HES) will be brought on board the LLB. A diver will attach explosive devices to the caissons' four H-Beams. The diver will return to the LLB and after consultation with MMCG, the explosives will be detonated using Halliburton's Exploding Bridge Wire (EBW) detonation system. Once the charges have been detonated and the caissons have been toppled, divers will determine the seabed position of the toppled caissons. An onboard review of the divers survey will identify ~~these~~ any caissons that ~~will~~ that may need to be repositioned for ~~nesting~~ to allow access to the well conductor.

Prior to installing the piles for the bird roosting/nesting platforms, the LLB will be moved shoreward on its anchors and the divers will remove any visible remnant pier pilings and debris and cut off the nearshore well conductor. The rock pile surrounding the well conductor will be left as hard bottom substrate. All protruding sheet pile from the rock pile that would remain will be removed.

Using divers, dive cameras, or a remotely operated vehicle (ROV) equipped with video capabilities, the entire causeway area will be surveyed to document removal of all the inshore debris items.

The revised Proposed Project intends to topple the concrete caissons in place and cover them with quarry rock. Quarry rock will be brought to the site on barges, most probably from the Connolly-Pacific site on Catalina Island. Divers, or an ROV equipped with video capability will occasionally review rock placement and depth and advise which areas have achieved the depth requirement and which areas need additional rock. Quarry rock will be deposited in the area encompassing the ~~nesting~~ caissons to a depth to only cover half of the caissons, i.e., approximately ~~nine~~ five feet above the natural seabed. Areas between caissons will receive quarry rock to a lesser depth accordingly.

Construction of the four bird roosting/nesting platforms will involve driving four pipe piles to support the roosting/nesting platforms. The roosting/nesting platforms are designed to provide approximately equal roosting area to that currently available on the remnant structure such that each pile will support a roosting area of approximately 200 square feet. Each pile will be configured to support three trapezoidal roosting/nesting areas, each positioned at a slightly different elevation (see Figure 1-5). Steel pipe, plates and shapes of a grade appropriate for the predicted environmental and installation stresses will be used in construction. Diamond plate will be provided as the roosting/nesting surface. The upper portions of the piles and platforms will be painted white per CDFG request. The roosting/nesting platforms have been designed to be above the predicted crest elevation of the 100- year wave. CDFG biologists and CDFG Office of Spill Prevention and Response (OSPR) marine bird specialists have reviewed the roosting/nesting platform design and spatial arrangement and the present design incorporates their recommendations.

Insert Figure 1-5 - Bird Roosting/Nesting Platform Design

Black & White - 8.5 x 11

A final underwater survey using divers, dive cameras, and a video- and sonar-equipped ROV will be conducted throughout the entire demolition area to ensure the removal of all debris items. Using the same equipment, surveyors will inspect and document the removal and recovery of ~~the seven~~ all debris targets (nos. 1, 7 and 8) identified in the Fugro Seafloor Features Survey conducted on March 10, 1999 (as included in the revised CSLC Permit Application) that were not subsequently identified as natural features by the Oceaneering Dive Survey (see Appendix H). This procedure will include a final confirmation for the record that target no.'s 2, 3, 4, 5 & 6 are not man-made, if they are, they will be removed.

VENOCO is the current PRC-421 leaseholder. However, ARCO is obligated to remove the remnant pier structures at PRC-421 per requirements of the 1993 Transfer Agreement between ARCO and Mobil. Therefore, ARCO will remove and/or otherwise reposition the visible remains of the remnant structures and incorporate specific components in a hard bottom substrate that will support four piles with new platforms to serve as roosting and nesting habitat for the brown pelican, cormorants, and other seabirds. Once Project activities are completed, the CSLC will issue a new lease to CDFG for the surface area of PRC-421 that will be occupied by the hard bottom substrate and platforms. VENOCO, the current leaseholder, will have ongoing responsibility for the abandoned well conductor and the lease area remaining under PRC-421.

## **1.2 SCOPING AND PUBLIC REVIEW OF THE DRAFT EIR**

The CSLC is serving as the Lead Agency responsible for preparing this CEQA document in consultation with other agencies and the public. The CSLC filed a Notice of Preparation (NOP) for a Draft Environmental Impact Report on the revised Project with the State Clearinghouse (SCH #2001021119) on October 9, 2003, with copies to State and local agencies. It described the Project and probable environmental effects. Comments and identification of issues received by the CSLC were incorporated into the preparation of the EIR.

## **1.3 ENVIRONMENTAL MEASURES INCORPORATED IN THE PROJECT PLAN**

To minimize the environmental impacts of this Project, several measures have been built into the Project plan. Some of the measures are presented below, these and other measures are presented in the applicant's *Anchor Mitigation and Hard Bottom Avoidance Plan*, *Heavy Lift Rigging Plan*, *Explosive Transportation and Operations Plan*, *Wildlife Protection Plan*, and *Marine Mammal Contingency Plan* (provided as Appendices C, E, K, J and L respectively).

1. Mapping of hard bottom (Figure 4.1-1) and kelp (Figure 4.4-3) has been performed for the Project area.
2. Protection of hard bottom habitat has been designed into the Project through the Anchor Mitigation and Hard Bottom Avoidance Plan.
3. Anchor placements will be kept to a minimum number, and will be placed in a manner in which movement of vessels will be minimized.

4. Pre-designated anchor placements have been chosen to be located, where feasible, in soft-bottom habitat.
5. Anchors will be "flown" via one of the support vessels before being dropped at its pre-determined location. Precise pre-determined anchor placements are located using DGPS positioning system. This shall reduce the dragging of anchors and their towlines across the ocean floor over hardbottom areas.
6. All work and support vessels shall comply with the established oil service vessel corridors when traversing the Project area.
7. Information regarding the Project will be posted in the USCG Local Notice to Mariners.
8. The Project schedule will be timed to avoid the CDFG identified bird nesting period and California gray whale migration.
9. An aerial monitoring survey and shipboard line transect monitoring survey shall be conducted at least one hour before detonations. The purpose of the surveys is to make certain no protected wildlife is in the hazard zone or likely to enter the hazard zone.
10. Once both the aerial and shipboard line transect surveys have been completed, the boats will patrol a 1,000-yard hazard zone, and the aircraft will patrol an additional one mile buffer zone to ensure that no protected wildlife is likely to enter the hazard zone.
11. Two observers will be stationed onshore to ensure adequate coverage of the surf zone, which is inaccessible to monitoring vessels.
12. If any birds remain roosting on the structure and do not respond to warning signals, a ~~detonation cap~~ small air horn will be used, or starter's pistol will be fired to frighten them away for their own safety.
13. Prior to detonation, a diver will survey the detonation site to ensure that no appreciable numbers of fish are present. If appreciable numbers of fish are present, the principal investigator may postpone the detonation.
14. Monitoring shall continue during and after detonations as described in the *Wildlife Protection Plan* (Appendix J).
15. The *Marine Mammal Contingency Plan* (MMCP) (Appendix L of this EIR) will be followed while operating any of the Project's vessels to avoid the harassment or injury of marine mammals.
16. The same monitoring methods and hazard zone described for the explosives operations shall be employed during pile driving operations, except that pile driving operations may continue until sunset. These measures shall be repeated every day pile driving operations take place. Additionally, sound pressure measurements shall be conducted as outlined in the *Wildlife Protection Plan* (Appendix J)

17. Prior to beginning the placement of quarry rock each day or each time a new load of quarry rock is ready, a land-based monitor shall make certain that no marine mammals are present within 500 feet of the Project site.
18. Jetting of ocean floor sediments will be minimized to the furthest extent feasible.
19. Well conductor cutting and removal operations will follow the procedures and conditions contained in the Supplemental Notice to be approved by the Division of Oil, Gas and Geothermal Resources and the State Lands Commission.
20. ARCO and its contractor shall follow its preventative measures and oil spill response procedures as outlined in its *Oil Spill Contingency Plan*.
21. The *Explosive Transportation and Operations Plan* will be implemented to ensure that accidents during the use of explosives are prevented and that hazards associated with the material and its use are avoided.
22. Exposure of explosive operations will be limited to a minimum number of personnel, for a minimum amount of time, to the minimum amount of explosive materials consistent with safe and efficient operations.
23. All barges and vessels shall be winched to a safe distance, approximately 150 feet away from the structure prior to blasting.
24. The Safety Procedures and Misfire Contingencies section of the *Explosive Transportation and Operations Plan* will be followed during all explosive operations.
25. Safety and prevention measures outlined in the approved, Project-specific *Oil Spill Contingency Plan* will be followed. The Plan addresses the prevention measures and spill response team capabilities for any release of hydrocarbons to the environment.
26. Bird roosting/nesting platforms will be erected in order to permanently provide for seabird roosting/nesting habitat in place of the former pier structure.

#### 1.4 SIGNIFICANT EFFECTS AND RECOMMENDED MITIGATION MEASURES

A wide range of Project effects were evaluated in detail. Those that were considered to be potentially significant are listed below. The recommended mitigation measures that would render them insignificant are detailed in Table 2-1.

Transportation- Addition of bird roosts will ~~create~~ replace an existing a permanent navigational hazard with another.

Hazards- Health hazard associated with use of explosives.

Noise- Mobilization, demolition, recovery, construction, and de-mobilization activities will result in increased daytime noise levels.

## **1.5 INSIGNIFICANT EFFECTS WITH RECOMMENDED MITIGATION MEASURES**

Some Project effects were identified that, while they were considered to be less than significant (in some cases due to mitigation measures incorporated into the Project), have opportunities to further reduce the level of impact by application of recommended mitigation measures identified in Section 4.0 and summarized in Table 2.1. These Project effects are listed below.

Biological Resources- The detonation of underwater explosives to topple pier columns, driving of pilings to support the nesting platforms, and deposition of quarry rock will increase noise levels and associated percussive impacts in the project area, possibly affecting marine mammals, birds, and fish.

Biological Resources- Impacts to roosting/nesting seabirds during pier removal prior to erection of proposed roosting platforms.

Biological Resources- Anchoring of the derrick barge and dive service vessel, and toppling of the caissons may impact hardbottom areas located near the remnant pier structures.

Noise - Detonation of underwater explosives will increase noise levels in the project area.

Aesthetics- Pier removal activities would result in short-term visual impacts.

## **1.6 UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS**

The evaluations conducted in the EIR found no unavoidable significant adverse impacts associated with the Proposed Project.

## **1.7 ANALYSIS OF PROJECT ALTERNATIVES**

Section 15126.6 of the State CEQA Guidelines states that an EIR must "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The State CEQA Guidelines also require that a No Project Alternative be evaluated and that an environmentally superior alternative be designated, other than the No Project Alternative.

The following are brief descriptions of Proposed Project alternatives considered and discussions of how each compares to the Proposed Project. Mechanical cutting of the caissons was also considered, but rejected from further consideration (see Section 6.1, for further discussion).



### **1.7.1 Originally Proposed Project (Removal of Caissons - No Roosting Platform)**

Under the originally Proposed Project, the concrete pier structure including caissons would be removed entirely utilizing typical offshore methodology and equipment, and recovered from the Project site. Removal of the topside decking would be conducted within the use of a 25-ton conventional barge-based crane. Removal of the caissons would be accomplished through the use of explosives to initially topple the columns, and then recovered from the sea floor with the use of a 350-ton capacity crane. Once recovered, the columns would be transported aboard the barge for recycling. This Project alternative would meet the objective of removing the hazardous structure from the site. The alternative does not provide roosting platforms to offset the loss of seabird roosting area presently provided by the pier remnants. Therefore, an associated Class I, unavoidable impact would result.

Generally, impacts associated with the Originally Proposed Project would be similar to those associated with the Proposed Project. Notable exceptions as summarized as follows:

- This alternative would avoid the insignificant air quality impact associated with occasional trips to the roosting/nesting platforms associated with the Proposed Project.
- The Original Project avoids the significant, but mitigable impact associated with the hazard to navigation that is associated with the Proposed Project which would replace the existing hazard posed by the pier remnants with bird roosting/nesting platforms.
- This alternative would preclude use of the toppled caissons for hard-bottom substrate and introduction of quarry rock which can serve as habitat for a variety of marine life.
- The Original Project and Proposed Project would impact kelp from anchoring and removal of the pier remnant. This impact would be significant but mitigable. Under the Proposed Project, a net benefit to kelp would occur due to the introduction of additional substrate that can serve as anchoring locations for kelp.
- This alternative would not provide the minor benefit of improved commercial and recreational fishing provided by the improved habitat associated with the Proposed Project's hard bottom substrate component.
- Short-term significant but mitigable noise impacts from construction would be avoided under this alternative because pile driving activity and the associated noise would not occur.
- This alternative would have a beneficial long-term aesthetic impact due to the removal of the pier remnants, and the less than significant long-term aesthetic impacts associated with the installation of the roosting/nesting platforms would be avoided under this alternative.

- The beneficial effect to fishing and diving would not be provided by the Original Project.

### 1.7.2 No Project Alternative

Under the No Project alternative, the existing facilities would be allowed to continue to exist in their current state. It is anticipated that natural conditions (i.e., corrosion, storm waves) will result in the eventual toppling of the concrete caissons. These caissons would remain on the seafloor and serve as additional hardbottom substrate. Pilings extending inshore would continue to exist in the area.

## 1.8 AREAS OF CONTROVERSY

The State CEQA Guidelines require a lead agency to identify known areas of controversy, including issues raised by agencies and the public, in the EIR summary.

The previous pier removal Project has been revised in order to avoid potential areas of controversy associated with removal of active bird roosting/nesting sites for the California brown pelican and cormorants by constructing four permanent bird roosting platforms shoreward of the former pier structure. ~~to accommodate for this loss of habitat.~~

## 1.9 ISSUES TO BE RESOLVED

The State CEQA Guidelines also require the EIR summary to identify issues to be resolved, including selection of Project alternatives and impacts mitigation.

The Proposed Project, as planned, has addressed a wide range of operational and environmental issues. There are no known areas of unresolved issues at this time.

## 1.10 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The State CEQA Guidelines [section 15126.6 (d)] require that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project. The Guidelines [Section 15126.6 (e)(2)] further state, in part, that **“If the environmentally superior alternative is the “No Project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”** (Emphasis added)

Based upon the document’s analyses of the alternatives presented in Section 6.0, it has been determined that the “No Project” alternative, would, in itself, result in both near and long term hazards to the public’s health and safety and potential impacts to seabirds if the remnants collapse during nesting season. It is, consequently, not considered to be the environmentally superior alternative.

When the “No Project” alternative is not the environmentally superior alternative, the State CEQA Guidelines do not require identification of an environmentally superior alternative from the remaining alternatives.

**Table 1-1. Summary of Environmental Impacts for the Proposed Project**

Impact Class    1    = Significant unavoidable adverse impact that cannot be mitigated.  
                      2    = Adverse environmental impacts that can be mitigated to less than significant levels.  
                      3    = Adverse environmental impacts that are less than significant or have no identified impact; and thus, no mitigation is required.  
                      4    = Beneficial impacts benefit or improve the environment and no mitigation is required.

Level of Impact   S    = Significant  
                          LTS   = Less than Significant  
                          NI    = No Significant Impact  
                          B    = Beneficial

Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
<b>Section 4.1 Geology and Coastal Processes</b>				
GEO-1	Disturbance of sediment during removal of piles toppling of caissons and placement of quarry rock.	3	None required.	LTS
GEO-2	Impacts associated with subterranean geology.	3	None required.	LTS
GEO-3	Anchor and chain abrasion of hard bottom.	3	None required.	LTS
GEO-4	Seismic impacts to proposed structure.	3	None required.	LTS
GEO-5	Alteration of wave energy.	3	None required.	LTS
GEO-6	Alteration of coastal currents.	3	None required.	LTS
GEO-7	Change to nearshore sediment drift and beaches.	3	None required.	LTS
<b>Section 4.2 Air Quality</b>				
AIR-1	Vessel and Equipment Emissions.	3	None required.	LTS
<b>Section 4.3 Transportation</b>				
TRF-1	The Proposed Project will increase traffic on local and regional roads during construction.	3	None required.	LTS
TRF-2	Truck-related traffic could potentially present additional safety hazards to existing conditions.	3	None required.	LTS

Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
TRF-3	The Proposed Project will increase vessel traffic in the project area and within established shipping lanes.	3	None required.	LTS
TRF-4	The Proposed Project, like the structure it replaces, will be a hazard to navigation.	2	Notify NOAA regarding hardbottom substrate and bird roosting/nesting platforms for inclusion on all future nautical charts.	LTS
<b>Section 4.4 Biological Resources</b>				
BIO-1	The detonation of underwater explosives to topple pier columns, driving of pilings to support the nesting platforms, and deposition of quarry rock will increase noise levels and associated percussive impacts in the project area, possibly affecting marine mammals, birds, and fish.	3	<p>None required, however following mitigation measures are recommended to further reduce potential impacts</p> <p>The principal investigator should not be allowed to waive the need for aerial surveying and monitoring as stated in the Wildlife Protection Plan in the event that a low ceiling or other factor precludes aerial monitoring. Should weather conditions or other factors prevent aerial surveying and monitoring, then no detonations should occur until such conditions subside and aerial surveying and monitoring can be conducted.</p> <p>Prior to each detonation of the charges, a "bubble curtain" shall be placed around the caisson area. The bubble curtain will create a continuous stream of bubbles around the perimeter of the caissons reducing the effects of the explosion on fish. It is also anticipated that the bubble curtain itself will produce enough underwater noise and visual activity to reduce the number of fish within the area surrounding the caissons prior to detonation. This will deter fish from swimming too close to the caisson during the detonation procedure.</p>	LTS

Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
BIO-2	Temporary increases in suspended sediments will occur as a result of project activities such as placement of anchors, jetting of material prior to toppling of pier columns, toppling the pier columns onto the ocean floor and deposition of quarry rock.	3	<p>None required. However, in response to the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) concerns regarding pink and green abalone, the following measures shall be implemented:</p> <p><u>An underwater survey aimed at identifying white, pink and green abalone within the project area shall be conducted no more than 30 days prior to the start of the project. Searches should focus on areas within a 100-foot radius of anchoring and pile driving locations and should pay special attention to those sites that contain low and high relief rocky outcroppings.</u></p> <p><u>ARCO shall contact NOAA Fisheries immediately if white, pink or green abalone is identified during the underwater dive survey. If white abalone are detected within a 40-foot radius of anchor or pile driving locations, project activities should halt until the animals have been relocated or another appropriate alternative has been identified.</u></p> <p><u>ARCO shall submit copies of its underwater survey results to NOAA Fisheries in as timely a manner as possible.</u></p>	LTS
BIO-3	Impacts to wildlife from potential hydrocarbon-based fuel spills from work vessels may occur.	3	None required.	LTS
BIO-4	Potential impacts to commercial and recreational fishing may occur.	3	None required.	LTS
BIO-5	Impacts to roosting/nesting seabirds during the period that the pier is being removed and prior to erection of the proposed roosting platforms.	3	<p>Although short-term impacts to roosting/nesting seabirds is anticipated to be less than significant, the following mitigation measure is recommended:</p> <p>Determination of presence or absence of nesting birds on the structure shall be conducted by a State-approved biological monitor. If it is determined that at the scheduled time of Project implementation immature birds still occupy their nests at the structure, the Project shall be postponed until all the birds have left.</p>	LTS

Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
BIO-6	Anchoring of the derrick barge and dive service vessel, temporary moorings, and toppling of the caissons may impact hardbottom areas located near the remnant pier structures.	3	<p>A State-approved construction or biological monitor shall confirm that the areas to which the anchors are flown are located at the pre-determined anchor placement locations.</p> <p>The anchor locations shall be ground-truthed by a diver immediately prior to Project operations in order to determine whether anchor site revisions could reduce kelp and hardbottom habitat impacts.</p> <p>Prior to installing the temporary mooring buoys, a diver-biologist survey will be conducted to ensure that kelp and hard bottom substrate is avoided.</p>	LTS
BIO-7	Loss of kelp bed habitat for fish may occur as a result of anchor lines, placement of temporary moorings, toppling of the pier columns, and removal of other pier remnant structures.	<u>23</u>	<p>Within two weeks prior to anchoring vessels, cut kelp to a depth of 1.2 m (4 ft) below the sea surface, along the inshore anchor corridors.</p> <p>Pre-position the inshore anchors and secure the anchors to the vessels via "soft line" (<u>wire rope is acceptable</u>) from a pennant buoy attached to the anchor.</p> <p>Any kelp habitat lost due to Project activities will be reported to the NMFS pursuant to Section 305(b) of the Marine Fishery Conservation and Management Act (MFCMA).</p> <p>The imported rock fill <u>around well no. 7</u>, which has kelp attached to it, will not be removed.</p> <p>A mitigation program will be implemented for significant kelp lost from natural substrates. Mitigation for kelp lost on man-made substrate will not be required because these kelp beds would not have occurred naturally. The program will include:</p> <ul style="list-style-type: none"> <li>- A pre- and post-Project underwater biological survey will be conducted to determine the number of kelp plants (growing on natural substrate) that was lost during Project activities. The results of the post-Project survey and the comparison with pre-Project conditions will be used to establish the need for a kelp restoration plan. Maps of hardbottom and kelp features prior to project implementation have been provided in Figures 4.1-1 and 4.4-3 and will be updated no more than</li> </ul>	LTS

Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
			<p>30 days prior to initiation of project removal activities. Maps of these features subsequent to the project will be provided in the Project Completion Report (to be completed within three months following completion of removal of the PRC-421 pier remnants).</p> <ul style="list-style-type: none"> <li>- The need for any kelp replacement will be based upon a methodology and significance criteria to be pre-approved by the applicable permitting and regulatory agencies (e.g., CSLC, CCC, NMFS).</li> <li>- If determined necessary, kelp replacement may be accomplished through artificial attachment of juveniles or subadult plants to substrate within the affected area or other method approved by the permitting and resources agencies. (The University of California Santa Barbara and <del>Kelee</del> <u>ISP Corporation</u> have developed methods and successfully completed transplants by attaching recruit, juvenile, and adult plants to rock substrate.)</li> </ul>	
BIO-8	A long-term impact on commercial and recreational fishing would occur.	4	None required.	B
<b>Section 4.5 Hazards</b>				
HAZ-1	Release of hazardous materials during transportation of explosives.	3	None required.	LTS
HAZ-2	Release of hazardous materials during operation of explosives.	3	None required.	LTS
HAZ-3	Release of hydrocarbons.	3	None required.	LTS
HAZ-4	Interference with emergency response/evacuation plans.	3	None required.	LTS

Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
HAZ-5	Health hazards from use of explosives.	2	Prior to the initiation of explosive use, all personnel involved in operations around/with explosive use (i.e. work crew, marine mammal monitors, environmental compliance monitors, and State representatives) will be briefed on the procedures and requirements outlined in the Explosives Transportation and Operation Plan.	LTS
HAZ-6	Personnel safety during diving operations.	3	None required.	LTS
HAZ-7	Introduction of DENSO coating to the ambient environment.	3	None required.	LTS
HAZ-8	Introduction of concrete caissons to the ambient environment.	3	None required.	LTS
<b>Section 4.6 Noise</b>				
NOI-1	Mobilization, demolition, recovery, and de-mobilization activities will result in increased daytime noise levels.	2	Consistent with County thresholds, <del>construction activities</del> <u>pile driving</u> shall be confined to the period between 8:00 a.m. and 5:00 p.m. on weekdays <del>during the pile driving phase of the Proposed Project.</del>	LTS
NOI-2	The detonation of underwater explosives to topple pier columns will increase noise levels in the project area.	3	The affected public shall be notified in advance of the detonations in order to reduce potential disturbance/annoyance. Notification shall include placing warning signs at ingress points to Haskell's Beach, at the Sand Piper Pro Shop, at the Bacara Resort, and in the County Parks. The signs shall indicate that a total of eight denotations will occur in rapid succession, the construction window, and the estimated intensity/loudness of the detonations. The signs will note that explosions will be preceded by a warning sound (the sound will be defined before project construction to ensure that it is unique from other warning devises used in the area at that time) from the workboat at the pier.	LTS
NOI-3	Long-term maintenance of the proposed bird roosting platform would result in minimal noise producing activity.	3	None required.	LTS



Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
<b>Section 4.7 Aesthetics</b>				
VIS-1	Pier removal activities and roosting platform construction would result in short-term visual impacts.	3	None required. The following measure is recommended: The project proponent shall conduct an educational outreach program to inform the public about the project and the construction activities. This would include notifying the media, commercial facilities, and residents in the area about the type and duration of construction activities a month prior to beginning pier removal activities. Temporary notices would also be posted along the shore at all nearby beach accesses.	LTS
VIS-2	The Proposed Project will result in the removal of a dilapidated, non-serviceable structure from the viewshed and its replacement with a new series of marine bird roosting/nesting platforms.	3	None required.	LTS
<b>Section 4.8 Cultural Resources</b>				
CUL-1	Construction of the proposed roosting/nesting platforms would involve minor ocean floor disturbance which could affect unknown paleontological resources..	3	None required.	LTS
CUL-2	Removal of the PRC-421 pier remnants could affect unknown archaeological, historic, and/or ethnographic resources.	3	None required.	LTS
<b>Section 4.9 Recreation</b>				
REC-1	Effects of proximity of pier removal and roosting platform construction to onshore and nearshore activities.	3	None required.	LTS
REC-2	Effects of pier removal and roosting platform construction on boaters.	3	None required.	LTS
REC-3	Effects of excluding other uses during pier removal and roosting platform construction.	3	None required.	LTS

Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
REC-4	Effects of proximity of pier removal and roosting platform construction to onshore activities.	3	None required.	LTS
REC-5	Effects of pier removal and roosting platform construction on boaters.	3	After completion of the Proposed Project, the U.S. Coast Guard will be contacted so that boaters may be advised, through the Local Notice to Mariners, that the construction hazard is no longer present, but a new permanent nearshore object is present.	LTS
REC-6	Potential effects on waves and surfing.	3	None required.	LTS
REC-7	Potential effects on fishing and diving	4	None required.	B
<b>Section 4.10 Water Quality</b>				
WAT-1	The Proposed Project has the potential to introduce contaminants to the water column during demolition, construction, and recovery operations.	3	None required.	LTS
WAT-2	The Proposed Project has the potential to increase turbidity during demolition.	2	Jetting of ocean floor sediments will be minimized to the furthest extent feasible. The jetted material will be placed immediately adjacent to the work area.	LTS
WAT-3	The Proposed Project has the potential to increase concentrations of organic matter within the water column, which could increase primary productivity and decrease dissolved oxygen concentration in the vicinity of the piers during construction.	3	None required.	LTS
WAT-4	Water Quality Impacts Associated with the Proposed Bird Roosts	3	None required.	LTS
<b>Section 4.11 Environmental Justice</b>				
	Environmental Justice - The Project would not impact minority or low income populations or affordable housing.	3	None required.	NI
<b>Section 5.0 CEQA Considerations</b>				
	Cumulative Impacts - The Project would contribute to cumulatively significant impacts in the areas of biology, noise and water quality.	2	Mitigation proposed for the reduction of Project-specific impacts would also serve to reduce the Project's contribution to cumulative impacts to less than significant.	LTS

Impact No.	Impact	Impact Class	Recommended Mitigation Measures	Level of Impact (with mitigation if needed)
	Cumulative Impacts - The Project would have a less than significant contribution to cumulative impacts in the areas of <u>biology</u> , air quality, transportation, cultural resources and paleontological resources.	3	None required.	LTS
	Growth - the Project would introduce temporary construction workers to the area.	3	None required.	LTS